

San Pedro de la Paz, 06.03.10

Dear Colleagues and Friends,

this is my first message to all of you at all continents after the earthquake with magnitude 8.8 and a duration of about 2 minutes 30 seconds (which is unusually long!). First of all, I would like to thank you for your concern regarding the well-being of my family members and colleagues of the TIGO crew. With most of our staff I have already been in contact or got second hand information that they survived and are well.

Today, one week after the event, it is the first day I got access to the internet, so that I can broadcast this message to you. The situation in Concepción as of today is the following: The 7th and 8th Region of Chile are under curfew. Hence we can leave our houses only between 12:00 and 18:00 local time. During these afternoon hours I could visit TIGO twice for about 4 hours. I needed to go by bicycle as the only track over a damaged bridge crossing Rio Bío Bío is jammed by cars waiting to cross the bridge up to 3 hours. With my bike I make it in 20 minutes. (Before we had 4 tracks each direction 24h.) Roads and cycle ways are heavily affected by cracks and steps of up to 50cm, which requires careful riding.

A first inspection of the TIGO-instruments showed, that our containers must have jumped around. Before the quake they were well aligned, they are not any more. The radiotelescope was held by its brakes. Visual inspection did not show any damage. So far I had no time to do a thorough test on the mechanics. I would like to be up with TIGO-VLBI as soon as possible, but there is still no electricity and internet at TIGO and our generator power is being used to maintain clocks and GPS only. We have to economize our fuel stock. Concerning TIGO-SLR we noted that the optical table was hit by the container (remember that the table stood on its own fundamentals, while the container moved over the ground). The absolute gravity meter fell down. The superconducting gravity meter maintained its temperature. The TIGO-GPS stations CONT and CONZ recorded 1s samples GPS/Glonass data. But without electricity the servers and the network of Universidad de Concepción are still down.

The University of Concepción suffered several losses and damages at their buildings. The Chemistry Faculty burnt and exploded twice during the earthquake night. Several buildings are in bad shape and need to be demolished and rebuilt. You can imagine, what this means for the scientists and the education of students. We have heard about the financial problems of the University regarding TIGO before the earthquake. What will be the situation now?

We are still hit by aftershock events. Within the first five days we counted more than 200 events of which at least 12 ranged in magnitudes between 6 and 7 (Richter scale). This indicates, that we are still not back to normal. People still tend to sleep in cars or outside. The days after the strong event on February 27 had been again very critical for all of us, when vandalism spread over the town. All shops, banks, farmacies, fuel stations and even medical stations were plundered and some of them were burnt after. That means that any kind of infrastructure, which is heavily needed to get back to normal life, is missing at the moment. Normal citizens needed to organize themselves building barricades and defending their block/neighbourhood. I myself did guard service night shifts with a wooden stick. Situation changed when the government sent about 8.000 soldiers to the 8th Region with its capital Concepción. Some plunderers were killed by armed authorities. The 7th and 8th Region are declared as disaster area for 30 days (basically the entire March). Normally, after the vacation period (which ended on Feb 28th), schools and universities had been supposed to begin their activities on March 1st. This has now been postponed by about one month. Chile is lacking

civil engineers who are needed to do many inspections before many buildings can be entered again. Thanks to the construction standards most of the buildings withstood the seismic movements without collapsing, but now they have to be demolished and rebuild completely. They fulfilled their purpose.

Downtown department houses are still subject to collapse by strong aftershock events. Therefore some streets are partly closed, because of this danger. Although electricity and water supply is coming back slowly, it sometimes interrupts again. My only information source during the last 7 days was the local Radio Bío Bío which even guided the authorities, when people reported what they witnessed. All of you had been probably better informed about our situation in the daily news, than ourselves caught with no electricity in silence. Little by little I am realizing the magnitude of the disaster. The tsunami generated by the major earthquake eliminated the village of Dichato where we operated our GPS-receiver of the TIGO-network. I got the information that the pillar resisted, but have no information about the equipment itself. Without permit and fuel I cannot go there myself. In the harbour town of Talcahuano containers were swept by the tsunami wave into houses, fishermen's ships are blocking the streets now. A 175m long vessel (25.000t) in the dock for repair is now resting on the quay. I heard that the wave reached 13m height. There are more disaster notes to come, as soon as communication are getting better.

Yesterday, first food packages could be sold under military control in small portions. The distribution is basically done during night hours, when nobody is allowed to be outside the houses. These are signs of recuperation of normality. Nevertheless, it will take years to recover from this earthquake (which is still not over due to the aftershocks), I would like to close my first message to the outside world with the following request:

When we decided on where to operate TIGO, we had considered the subduction zone of Chile as a location where we can measure geophysical phenomena which we do not observe easily at our mother observatory in Wettzell, Germany. In a German-Chilean effort we made everything possible to collect as much data as possible for more than 8 years. Currently German and Chilean project partners are having problems in financing TIGO. I am confident, that the so far detected damages of the instrumentation can be repaired.

Please be aware, that the scientific community has a unique opportunity to get a complete picture of pre- and post-megathrust-event data, if the operation of TIGO can be financially assured for at least the next 8 years. The uniqueness of the scientific data of TIGO is its tie to the global context thanks to the international services.

During the last days my colleagues and me have been facing death and destruction. The consequences from the disaster will accompany us during the months to come concerning our living and labour conditions. But we will bear them. Similar megathrust-events will repeat at other locations in the world in future times. If you want to help us, please help us to keep TIGO operational for the years to come. I am well aware of the fact that we need many more years to do reasearch for earthquake prediction. But even if we should need another 100 years, at least our generation will have been done the right thing by taking the first steps. Shutting the observatory off right now would mean shutting it off just in the moment when humanity could get the most benefit out of it. This is certainly not the time to give up. It is the time continue and get the most out of it! Please help us doing this.

Dr. Hayo Hase, BKG
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Please distribute this report, to whom it may concern!